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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/591,891	06/09/2000	Michael E. Knappe	2705-104	4437

20575 7590 04/07/2004

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EXAMINER

JUNG, MIN

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/591,891

Applicant(s)

KNAPPE ET AL.

Examiner

Min Jung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-18, 20, 21 and 24-38 is/are rejected.
- 7) ☒ Claim(s) 15, 19, 22 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 3-5, 7-9, 12-13, and 24-27 are rejected under 35 U.S.C. 102(e) as being anticipated by McClennon et al., US 6,408,327 (McClennon).

McClennon discloses a method and system for facilitating synthetic stereo audio conferencing of a plurality of users over a local or wide area network.

Regarding claims 1, 3, 7, 8, 24, 25, 26, 27, McClennon teaches multiple endpoints (110, 130, 135, 140, 185, 190, and 195 shown in Fig. 2, and clients 1-3 shown in Fig. 5), and receiving the packet voice data streams (the streams from client 1-3 shown in Fig. 5). McClennon teaches the mapping function of the present invention

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(col. 4, lines 4-25, col. 5, lines 22-26), and the mixing function of the present invention (col. 5, lines 26-28).

Regarding claim 4, 9, McClennon teaches the establishment of control protocol with one of the conferencing endpoints (col. 6, lines 42-45 and lines 57-62, the server performs the conferencing and the stereo synthesis wherein the individual signals from clients are transmitted to the server and the processed signals are sent to each respective client).

Regarding claim 5, 12, 13, McClennon teaches the splitting function (the stream of data at the output of 516 being input to the left and the right synthesis blocks 522 and 524 for producing two streams of data, Fig. 5), the relative delay changing function and the relative amplitude changing function (col. 4, lines 4-25), and the splitting and adding function (the combination of stereo synthesis function and the final mix function shown in Fig. 5).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over McClennon.

Regarding claims 2, 18, and 21, McClennon fails to specifically teach dividing the first sector into at least two subsectors to represent plurality of voice arrival directions. However, McClennon teaches that his teaching may be implemented with different plurality of clients. See col. 4, lines 54-57. Thus, McClennon's teaching may have corresponding number of sectors for the number of clients. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to implement McClennon such that the sectors are subdivided as necessary to accommodate the number of clients.

5. Claims 6, 10, 11, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McClennon in view of Smits, US 6,125,115.

Regarding claims 6, 10, 11, 17, and 20, McClennon fails to specifically teach graphical user interface to allow the listener to manipulate the interface. Smits teaches user configuration of locations utilizing keyboard, mouse, touch-screen, etc. See col. 6, lines 44-60. Since Smits' teaching is in the same field of endeavor, with specific teachings of sound positioning in conference environment, it would have been obvious for one of ordinary skill in the art at the time of the invention to implement McClennon's system by adopting the GUI as taught in Smit in order to provide user with more flexible options of sound field planning.

Regarding claim 16, McClennon fails to specifically teach packet voice data containing information from which voice directional information can be derived. Smit teaches that source identification is used to identify or distinguish the audio data arriving

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from different sources. See col. 5, line 64 – col. 6, line 3. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to implement the McClennon's conferencing scheme by adopting the identification method for identifying the source direction taught by Smit to derive the voice directional information.

Regarding claims 28-39, McClennon further fails to specifically teach decoders, although some kind of decoder/decoding step is inherent in McClennon because of the nature of communication environment it is implemented on. Smits, however, specifically teaches decoder (audio decoder 364 in Fig. 3) in his conferencing system. Therefore, it would have been obvious, if not inherent, to include decoders in McClennon, as taught in Smit, to provide necessary decoding functions. Further, the controller communicating with the conferencing endpoints read on the server performing the conferencing and the stereo synthesis wherein the individual signals from clients are transmitted to the server and the processed signals are sent to each respective client. See col. 6, lines 42-45 and lines 57-62. Further, jitter buffer reads on the jitter buffers 502, 506, 510 shown in Fig. 5. Further, regarding GUI, above rejection regarding claims 6, 10, 11, 17, and 20. Further, specifically regarding claim 39, the teaching of synthetic stereo conferencing embodied in the server of McClennon (the second embodiment, col. 6, line 42 – col. 7, line 25) reads on the claim, except of the specific teaching of codec and encoding. The specific teaching of coding/decoding is provided in Smit. It would have been obvious for one of ordinary skill in the art at the time of the invention to apply coding and decoding to the voice packet data as taught in Smit when implementing the conferencing scheme of

McClennon to provide appropriately coded (decoded) data for the specific protocol utilized.

6. Claims 14 rejected under 35 U.S.C. 103(a) as being unpatentable over McClennon in view of Connor et al., US 6,011,851 (Connor).

McClennon fails to specifically teach mapping of monaurally received audio data into multiple voice data channels. Connor specifically teaches a spatial processor which receives monaural input and separating it into left channel and right channel. Connor's teaching is in the same field of endeavor specifically teaching spatial audio processing. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to utilize the well known scheme of monaural data processing taught in Connor in the audio conferencing method of McClennon in order to enhance the quality of monaural voice data.

Allowable Subject Matter

7. Claims 15, 19, 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

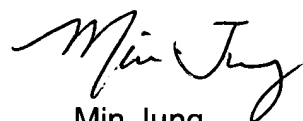
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Willehadson et al. patent is cited for further reference.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Min Jung whose telephone number is 703-305-4363. The examiner can normally be reached on Monday-Friday, 7AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
April 2, 2004


Min Jung
Primary Examiner